



United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 11, 2009

Tom Hatzopoulos - HBR
US EPA New England R1
One Congress Street
Boston, MA 02114 - 2023

Project Number: 09090008

Project: Parsons Papermill - Holyoke, MA

Analysis: Bulk Asbestos Analysis by PLM

Analyst: Scott Clifford *SC for SC 9/11/09*

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGASBSD2.

Sample preparation and analysis was done following the EPA Region 1 SOP, EIASOP-INGASBSD2.

Analytical Method: Polarized Light Microscope (PLM) with Dispersion Staining.

All quantities are estimated volume percent.

Date Samples Received by the Laboratory: 09/03/2009

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340

Sincerely,

Daniel N Boudreau 9/11/09
Daniel N Boudreau
Chemistry Team Leader

The asbestos content of floor tiles varies greatly. Studies of 200 tiles done by Hector S. MacDonald and John Bedore of the Brookfield Academy never found a tile with greater than 28% asbestos. Peter Cooke of the McCrone Research Institute states that the asbestos content of floor tiles was typically 12%. Components of the floor tiles make analysis by PLM with dispersion staining difficult. Plasma ashing and solvent extraction are techniques employed to remove this interference. I employed solvent extraction using THF and found only one tile containing a low level of chrysotile. Asbestos levels of ~1% are likely to be from mineral contamination. Using this method it is difficult to determine low levels of asbestos and negative results should be considered inconclusive.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0001
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97829
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Reddish sand with rock, brick chunks and bits of burnt wood.
Traces of mineral wool.

Client Sample ID: R01-090902TH-0002
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97830
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Reddish sand/brick material.

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Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0003
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97831
Matrix: Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Chunks of brick material with long fibers visible. Sample is ~25% mineral wool.

Client Sample ID: R01-090902TH-0004
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97832
Matrix: Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Black, sandy material with debris and bits of burnt wood.

US ENVIRONMENTAL PROTECTION AGENCY
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Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0005
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97833
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Brown soil/sand.

Client Sample ID: R01-090902TH-0006
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97834
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	12	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	2	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: White pipe insulation.

US ENVIRONMENTAL PROTECTION AGENCY
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Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0007
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97835
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	1	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Flat black, hard tile like material.

Client Sample ID: R01-090902TH-0008
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97836
Matrix Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Flat, black root like material.

~10% cellulose.

US ENVIRONMENTAL PROTECTION AGENCY
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Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0009
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97837
Matrix: Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	ND	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Flat, cream colored hard material with straight fibers visible.

~80% mineral wool.

Client Sample ID: N/A
Date of Collection: N/A
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: N/A
Matrix: Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND		
	Amosite	ND		
	Anthophyllite	ND		
	Chrysotile	ND		
	Crocidolite	ND		
	Tremolite	ND		

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
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Parsons Papermill - Holyoke, MA

Bulk Asbestos Analysis by PLM

Client Sample ID: R01-090902TH-0010
Date of Collection: 9/2/2009
Date of Extraction: 9/10/09
Date of Analysis: 9/11/09

Lab Sample ID: AA97838
Matrix: Solid

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	5	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	5	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Soft, white pipe insulation.

s): 

Site #: R01-090902TH *Former Parsons Paper Company*
Contact Name: Tom Hatzopoulos
Contact Phone: 617-918-1284

Lab Contact: Doris Guzman
Lab: OEME

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

[illegible]